Case 293: Narrative

Case Vehicle (A): 1999 Chevrolet	Vehicle (B): 2000 Ford
Type: Tahoe LS, 4 x 2, 4-door SUV	Type: Econoline, 4 x 2, van
Driver: 28-year-old male	Driver: 39-year-old male
CDC: 12-FZEW-5	CDC: 02-RZAW-3

SITUATION

<u>1</u> It was dark, there were no streetlights, the weather was clear, and the four-lane asphalt road was dry and free of defects. <u>2</u> Case vehicle (A) is a marked state police vehicle that was on routine patrol and traveling east in the eastbound lane at a passenger-estimated speed of 97 kph (60 mph). <u>3</u> Vehicle (B) was stopped facing west in the westbound center turn lane. The driver of vehicle (B) reportedly thought that case vehicle (A) was far enough away, and attempted to make a left turn in front of case vehicle (A). The driver of case vehicle (A) applied the brakes, but the right front of case vehicle (A) struck the right side of vehicle (B). Both vehicles were towed due to damage. The driver of vehicle (B) had been drinking and a blood alcohol test revealed a level of .15.

The driver and right-front passenger of case vehicle (A) were both transported to a levelone trauma center with police-reported "B" and "A" injuries, respectively. The driver was
treated and released and the right-front passenger declined medical treatment.

All five occupants of vehicle (B) were transported to a level-one trauma center. The driver,
right-front passenger, and left second-seat passenger were not treated. The right secondseat passenger was treated and released and the center third-seat passenger was
hospitalized for two days.

GENERAL VEHICLE DAMAGE AND ESTIMATED CRASH SEVERITIES

- 4 Damage to case vehicle (A) was severe. 5 Direct damage began at the right-front bumper corner and extended 107 cm to the left, resulting in 59-percent vehicle overlap. The maximum crush was 109 cm, and it occurred 25 cm to the left of the right-front bumper corner.
- <u>6</u> Damage to vehicle (B) was moderate. <u>7</u> Direct damage began at the right-rear bumper corner and extended 182 cm forward to the rearmost portion of the right-side double doors and the upper sections of the right C- and D-pillars. The maximum crush was 37 cm and occurred just above the right-rear wheel. The impact caused induced buckling on <u>8</u> the left-side quarter panel and <u>9</u> the rear double doors. <u>10</u> There was no damage to the front of the vehicle. <u>6</u> The right wheelbase was increased 29 cm and <u>11</u> the left wheelbase was increased 22 cm.

Using the WinSMASH crash-reconstruction program, and $\underline{12}$ $\underline{13}$ $\underline{14}$ $\underline{15}$ $\underline{16}$ crush profiles measured for case vehicle (A) and $\underline{17}$ $\underline{18}$ $\underline{19}$ vehicle (B), the following impact severities were calculated:

		Calculated Velocity Change - kph (mph)			
Vehicle	Variable	Total	Longitudinal	Latitudinal	
Case Vehicle (A)	delta V	41 (25)	-40 (-25)	7 (4)	
Vehicle (B)	delta V	35 (22)	-12 (-8)	-33 (-21)	

NOTE: Case vehicle (A) was equipped with a crash data recorder (CDR) that was downloaded for analysis. Data were recorded for 270 ms before power and recording capabilities were lost. The adjusted-algorithm longitudinal velocity change was -19.09 mph when power was lost between 240 and 270 ms. Although the slope of the velocity-change profile is nearly horizontal at this time, suggesting that this is close to the total longitudinal delta V during the impact, the delta V of this crash is believed to be significantly higher

than 19 mph. The CDR recorded that the driver belt was unbuckled but this information is known to be suspect when power is lost prior to complete 300-ms recording. This type of CDR does not record pre-crash data.

DESCRIPTION OF DAMAGE TO CASE VEHICLE (A)

Exterior

<u>20</u> In the front, direct-contact damage was confined to the right and center portions, including the bumper, grille, right headlight assembly, and the hood, which were crushed rearward. <u>21</u> The hood latch was damaged and jammed closed but had been pried open by rescue personnel. <u>22</u> There was no damage to the left hood hinge, and <u>23</u> the right hood hinge was bent but not separated. The right side of the hood was buckled, and <u>24</u> the rear edge of the hood was elevated and had contacted <u>25</u> and cracked the lower-right corner of the windshield. There was a large section of bond separation in the upper-right-hand corner of the windshield, but this was reported to be post-crash vehicle inspection damage.

26 On the right side, the fender, the right-front wheel, and the lower sections of the A-pillar were crushed rearward. 27 Induced deformation to the upper A-pillar caused the roof and roof siderail to buckle upward. 28 Rearward movement of the lower A-pillar caused the right-front door to bow outward, the right-front door window to break, and both right-side doors to be jammed shut. 29 The right wheelbase was reduced 44 cm and the right-front tire was flat.

30 31 32 On the left side, the fender was deformed but there was no significant change to the left wheelbase. Both left doors remained closed and operational during the crash and none of the left-side glazing was damaged.

33 There was no damage to the rear of the vehicle.

Interior

This vehicle was equipped with steering-wheel and passenger frontal-impact airbags, and 34 35 36 both deployed in the frontal crash. There was no damage to the 40 steering-wheel or 41 passenger airbag module covers. There were no residual contact marks on the driver airbag and 37 38 39 only a few dried drops of blood on the passenger airbag. There was no damage to the 42 43 steering-wheel rim or 44 spokes, and no displacement of the steering-wheel column. 45 The gas and brake pedals were deflected slightly to the right. 46 The plastic knee bolster cover was scuffed by driver knee contact and was loosened and displaced downward. 47 48 The upper and mid instrument panels were loosened and displaced upward. 49 The armrest attached to the inboard side of the driver seat was loosened and deflected to the right. 50 The glove-box door was scuffed and 51 the right-front door panel was bowed out. 52 The upper section of the right A-pillar cover was loosened, the right roof siderail was buckled, and the right roof structure and headliner were buckled and displaced upward. 53 The ashtray on the right-rear door was knocked out. 54 The following intrusions were noted and measured:

Location	Component	Distance (cm)	Direction
left front 45	toepan	3	to rear
right front 55	toepan, far right @ max. intrusion	47	to rear
56	toepan, below glove-box	29	to rear
57	glove box at knee contact	10	to rear
58	instrument panel at far right	7	to rear

OCCUPANT KINEMATICS AND INJURIES

59 The 5-ft, 10-in, 210-lb, 28-year-old male driver was wearing the three-point belt, and 60 the frontal-impact airbag deployed. 61 Webbing imprints on the plastic D-ring and 62

plastic transferred to the belt webbing indicate belt use at the time of the crash and contradict the CDR output. The driver reportedly positioned the seat in a rearward track position with the seatback slightly reclined.

On impact, the driver moved forward relative to the vehicle interior. He sustained a brief loss of consciousness, probably due to impact forces, or possibly due to contact with the airbag. He sustained an abrasion over the most medial portion of the left clavicle, due to loading by the shoulder belt. He sustained a contusion to the left wrist, and an abrasion to the dorsal aspect of the left hand over the distal portion of the second metacarpal, probably due to contact with the instrument panel.

63 The 5-ft, 10-in, 200-lb, 34-year-old male right-front passenger was **not** wearing the three-point belt, as evidenced by the fact that there were 64 no webbing imprints on the plastic D-ring, but 37 38 39 the frontal-impact airbag deployed. He reportedly positioned the seat in a rearward track position with the seatback slightly reclined, and braced hard with both legs at the time of impact.

During the impact, the right-front passenger moved forward relative to the vehicle interior into the airbag. He sustained contusions to the left and right knees due to contact with the glove box, <u>66</u> as evidenced by scuff marks on the glove box door. He sustained sprains to the left and right ankles due to foot contact with the toepan and bracing. He sustained a contusion to the right hip, probably due to contact with the right-front door interior, <u>65</u> as evidenced by the scuff mark and deformed door panel.

The following tables and attached drawings <u>67</u> <u>68</u> summarize the injuries for the driver and right-front passenger of case vehicle (A).

Occupant: Driver	Age: 28 y	vears	G	Gender: Male	
Restraints: 3-point belt worn; frontal-impact airbag deployed	Stature: 178 cm (5 ft, 10 Mass: 95 kg (210 l			0 lb)	
Injury Description		A.I.S.		Injury Source	e
_			Defini	te Probable	Possible
Brief loss of consciousness		2		Impact forces	Airbag
Abrasion, over the most medial portion of the left clavicle		1	Should belt		
Contusion, left wrist		1		Instrument panel	_
Abrasion, dorsal aspect of left hand over distal portion of 2nd metacarpal		1		Instrument panel	
Maximum A.I.S. Level		2	_	_	
Injury Severity Score		5		_	

Occupant: Right front	Age:	: 34 years Gender: Male			
Restraints: 3-point belt <i>not</i> worn; frontal-impact airbag deployed	Stature: 178 cm (5 ft, 10 n)		Mass: 91 kg (200 lb)		
Injury Description		A.I.S.		Injury Source	
_			Definite	Probable	Possible
Contusion, right hip		1	_	Right door interior	_
Contusions, right and left knees		1	Glove box	_	_
Sprains, right and left ankles		1		Toepan/bracing	
Maximum A.I.S. Level		1		_	
Injury Severity Score		2			



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GASE NO. 286-26 GASE VEHICLE 1999 Ghousele CCCUPART Right from 84 year-sid male CEXTURE: F75 on (5.5, 16 in) MASS 91 kg 990 in ECSTRANTS: Speint belt paywork from 6 inpe

SERVICE NAME OF THE

lanter, right



Vehicle Report

General

Conditions

Variable Number and Name	Code Value	Code Description	Other Options
V206 — Urban/Rural Area	1	Urban	more
V207 — Limited Access Highway	0	No	more
V208 — Road Total Lanes	4	4 lanes or more	more
V209 — Intersecting Road Total Lanes	7	Other	more
V210 — Road Surface Type	1	Asphalt	more
V211 — Road Defects	0	No	more
V212 — Construction Zone	0	No	more
V213 — Road Alignment Vertical Plane	1	Level	more
V214 — Road Alignment Horizontal Plane	1	Straight	more
V215 — Surface Covering	10	Dry	more
V216 — Visibility Limitation	0	None	more
V217 — Visibility Obstruction	0	None	more
V218 — Speed Limit	6	86-90 km/h 55 mph	<u>more</u>
V219 — Precipitation Type	0	None	more
V220 — Precipitation Rate	8	Not applicable	more
V221 — Temperature	9	Unknown	more
V222 — Crosswind	9	Unknown	more
V223 — Light Conditions	5	Dark, unlighted	more
V224 — Mechanical Malfunction Mention	0	No	more
V225 — Case Vehicle and Object	0	No	more
V226 — Case Vehicle Rollover	0	No	more

V227 — Case Vehicle Ran Off Roadway	0	No	more
V228 — Moving Case Vehicle/Contacted Moving Vehicle	1	Yes	more
V229 — Case Vehicle/Contacted Stopped Vehicle	0	No	more
V230 — Stopped Case Vehicle/Contactd Vehicle	0	No	more
V231 — Total Vehicles Hit By Case Vehicle	1	1 vehicle	more
V232 — Any Fire in Crash	0	No	more
V233 — Max Police Severity-PAR	3	A - Incapacitating Injury	more
V234 — Driver Alcohol Involvement	0	Had not been drinking	more
V235 — Driver Alcohol BAC	80	Not tested	more
V236 — Driver Impairment Mention	0	No	more
V237 — Driven/Towed From Scene	2	Towed Due to Damage	more

Other Vehicle

Variable Number and Name	Code Value	Code Description	Other Options
V301 — Other Vehicle VIN	1FDRE14L5YHA	_	_
V302 — Other Vehicle Manufacturer/Body Code	12111	_	_
V303 — Other Vehicle Manufacturer	121	Ford	more
V304 — Other Vehicle Body Code	11	Passenger van; panel or cargo van	more
V305 — Other Vehicle Make/Model	3113	E-150 Econoline	more
V306 — Other Vehicle Model Year	2000	_	
V307 — Other Vehicle Mass	002107 kg	_	
V308 — Other Vehicle Number	2	Vehicle #2	more
V309 — Other Vehicle Number of Occupants	05	_	_
V310 — Other Vehicle Traveling Speed	995	Just starting up	more
V311 — Highest Police Injury Severity	3	A - Incapacitating Injury	more
V312 — Other Vehicle Type	11	Small van (e.g. Econoline)	more
V313 — Other Vehicle Wheelbase (cm)	350 cm	_	
V314 — Average Track Width	173 cm	_	
V315 — Overall Length	538 cm	_	_
V316 — Overall Width (OAW)	201 cm	_	_
V317 — Front Overhang (FOH)	076 cm	_	
V318 — Rear Overhang (ROH)	111 cm	_	_
V319 — Undeformed End Width (UEW)	180 cm	_	
V320 — Engine Displacement	5.4 <i>l</i>	_	
V321 — Engine: Number of Cylinders	08	_	_
V322 — Direct Damage Length (DDL)	999	Unknown	more
V323 — Front-End Overlap % (FEO)	99	Missing or Not applicable	more
V324 — Vehicle Overlap % (VOL)	99	Missing or Not applicable	more

General

Variable Number and Name	Code Value	Code Description	Other Options
V401 — VIN	1GNEC13R4XR1	_	_
V402 — Manufacturer/Body Code	11315	_	_
V403 — Vehicle Manufacturer	113	Chevrolet	more
V404 — Vehicle Body Code	15	_	_
V405 — Make/Model Code	2950	_	_
V406 — Model Year	1999	_	_
V407 — Vehicle Mass	002180 kg	_	_
V408 — Odometer Reading	094226 miles	_	_
V409 — Number of Occupants	02	_	_
V410 — Traveling Speed	097 kph	_	_
V411 — Body Type	22	Large utility (e.g. Suburban)	more
V412 — Stolen Vehicle	8	Not currently collected	more
V413 — Body Structure	1	Body and frame	more
V414 — Transmission Type	1	Automatic	more
V415 — Transmission Lever Location	3	Column	more
V416 — Steering	1	Power	more
V417 — Brakes	1	Power	more
V418 — Brake Type	2	Disc - front wheels	more
V419 — Brake Anti-lock Device	2	Four-wheel	more
V420 — Air Conditioning in Vehicle	8	Not currently collected	more
V421 — Drive Type	1	Rear wheel	more
V422 — Dual Rear Wheels	0	No	more
V423 — Original Restraint System Type	3	Airbag	more

V424 — Equipped With Roll Bar	1	Yes	more
V425 — Roof Type	1	Solid	more
V426 — Wheelbase	298 cm	_	_
V427 — Anti-lacerative Glass	0	None	more
V428 — Average Track Width	162 cm	_	
V429 — Overall Length	507 cm		_
V430 — Overall Width (OAW)	195 cm	_	
V431 — Front Overhang	091 cm	_	
V432 — Rear Overhang	117 cm	_	
V433 — Undeformed End Width (UEW)	180 cm	_	
V434 — Engine Displacement	5.7 <i>l</i>	_	_
V435 — Engine: Number of Cylinders	08	_	_
V436 — Direct Damage Length (DDL)	107 cm	_	
V437 — Front End Overlap % (FEO)	59	_	
V438 — Vehicle Overlap % (VOL)	59	_	

Damage

Description

Variable Number and Name	Code Value	Code Description	Other Options
V501 — Maximum Crush - Front	109 cm	_	_
V502 — Maximum Crush - Right Side	000 cm	No crush (or less than 1 cm.)	more
V503 — Maximum Crush - Rear	000 cm	No crush (or less than 1 cm.)	more
V504 — Maximum Crush - Left Side	000 cm	No crush (or less than 1 cm.)	more
V505 — Maximum Crush - Roof	000 cm	No crush (or less than 1 cm.)	more
V506 — Maximum Crush - Other	000 cm	No crush (or less than 1 cm.)	more
V507 — Are Events In Chronological Order	1	Yes	more
V508 — Event 1 Impact Location	1	On Roadway	more
V509 — Event 1 Impact Configuration	13	FRONT of case veh - SIDE of contacted Vehicle	more
V510 — Event 1 Object/Vehicle Contacted	11	Small van (e.g. Econoline)	more
V511 — Event 2 Impact Location	8	No 2nd event	more
V512 — Event 2 Impact Configuration	88	No 2nd event	more
V513 — Event 2 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V514 — Event 3 Impact Location	8	No 3rd event	more
V515 — Event 3 Impact Configuration	88	No 3rd event	more
V516 — Event 3 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V517 — Event 4 Impact Location	8	No 4th event	more
V518 — Event 4 Impact Configuration	88	No 4th event	more
V519 — Event 4 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V520 — Event 5 Impact Location	8	No 5th event	more
V521 — Event 5 Impact Configuration	88	No 5th event	more
V522 — Event 5 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V523 — Event 6 Impact Location	8	No 6th event	more

V524 — Event 6 Impact Configuration	88	No 6th event	more
V525 — Event 6 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V526 — Event 7 Impact On Road	8	No 7th event	more
V527 — Event 7 Impact Configuration	88	No 7th event	more
V528 — Event 7 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V529 — Primary CDC Case Vehicle -event Number	1	Event 1	more
V530 — Primary CDC Case Vehicle - impact speed	999	Unknown	more
V531 — Primary CDC Case Vehicle - Estimated By	1	Investigator	more
V532 — Primary CDC Case Vehicle -crush	109	_	
V533 — Primary CDC Case Vehicle -clock #1	12	12 o'clock	more
V534 — Primary CDC Case Vehicle letter 1 #1	06	F - Front	more
V535 — Primary CDC Case Vehicle letter 2 #1	26	Z - Side or end (B + P or R + C)	more
V536 — Primary CDC Case Vehicle letter 3 #1	05	E - Everything below belt line	more
V537 — Primary CDC Case Vehicle letter 4 #1	23	W - Wide impact area	more
V538 — Primary CDC Case Vehicle Extent #1	05	Extent 5	more
V539 — Primary CDC Case Vehicle -CDC #1	12FZEW5	_	
V541 — Primary CDC Case Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V542 — Primary CDC Case Vehicle letter 2 #2	00	Missing Data/Not applicable	more
V543 — Primary CDC Case Vehicle letter 3 #2	00	Missing Data/Not applicable	more
V544 — Primary CDC Case Vehic le letter 4 #2	00	Missing Data/Not applicable	more
V545 — Primary CDC Case Vehicle Extent #2	00	Missing Data/Not applicable	more
V546 — Primary CDC Case Vehicle -CDC #2	9800000	_	_
V547 — Primary CDC Contacted Vehicle - Impact Speed	999	Unknown	more
V548 — Primary CDC Contacted Vehicle - Estimated By	1	Investigator	more
V549 — Primary CDC Contacted Vehicle -crush	037	_	_
V550 — Primary CDC Contacted Vehicle -clock #1	02	2 o'clock	more
V551 — Primary CDC Contacted Vehicle letter 1 #1	18	R - Right Side	more
V552 — Primary CDC Contacted Vehicle letter 2 #1	26	Z - Side or end (B + P or R +	more

		C)	
V553 — Primary CDC Contacted Vehicle letter 3 #1	01	A - All or Top of vehicle to bottom of vehicle exclusive of	<u>more</u>
V554 — Primary CDC Contacted Vehicle letter 4 #1	23	W - Wide impact area	more
V555 — Primary CDC Contacted Vehicle Extent #1	03	Extent 3	more
V556 — Primary CDC Contacted Vehicle -CDC #1	02RZAW3	_	_
V558 — Primary CDC Contacted Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V559 — Primary CDC Contacted Vehicle letter 2 #2	00	Missing Data/Not applicable	more
V560 — Primary CDC Contacted Vehicle letter 3 #2	00	Missing Data/Not applicable	more
V561 — Primary CDC Contacted Vehicle letter 4 #2	00	Missing Data/Not applicable	more
V562 — Primary CDC Contacted Vehicle Extent #2	00	Missing Data/Not applicable	more
V563 — Primary CDC Contacted Vehicle -CDC #2	9800000	_	
V564 — Secondary CDC Case Vehicle - Event No	8	Not applicable	more
V565 — Secondary CDC Case Vehicle - Impact Speed	998	Not Applicable	more
V566 — Secondary CDC Case Vehicle - Estimated By	8	Not applicable (no vehicle/no impact)	more
V567 — Secondary CDC Case Vehicle -crush	998	Not Applicable	more
V568 — Secondary CDC Case Vehicle -clock #1	98	Not Applicable	more
V569 — Secondary CDC Case Vehicle letter 1 #1	00	Missing Data/Not applicable	more
V570 — Secondary CDC Case Vehicle letter 2 #1	00	Missing Data/Not applicable	more
V571 — Secondary CDC Case Vehicle letter 3 #1	00	Missing Data/Not applicable	more
V572 — Secondary CDC Case Vehicle letter 4 #1	00	Missing Data/Not applicable	more
V573 — Secondary CDC Case Vehicle Extent #1	00	Missing Data/Not applicable	more
V574 — Secondary CDC Case Vehicle -CDC #1	9800000	_	_
V576 — Secondary CDC Case Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V577 — Secondary CDC Case Vehicle letter 2 #2	00	Missing Data/Not applicable	more
V578 — Secondary CDC Case Vehicle letter 3 #2	00	Missing Data/Not applicable	more
V579 — Secondary CDC Case Vehicle letter 4 #2	00	Missing Data/Not applicable	more
V580 — Secondary CDC Case Vehicle Extent #2	00	Missing Data/Not applicable	more
V581 — Secondary CDC Case Vehicle -CDC #2	9800000	_	

V582 — Secondary CDC Contacted Vehicle - Impact Speed	998	Not Applicable	more
V583 — Secondary CDC Contacted Vehicle - Estimated By	8	Not applicable (no vehicle/no impact)	<u>more</u>
V584 — Secondary CDC Contacted Vehicle -crush	998	Not Applicable	more
V585 — Secondary CDC Contacted Vehicle -clock #1	98	Not Applicable	more
V586 — Secondary CDC Contacted Vehicle letter 1 #1	00	Missing Data/Not applicable	<u>more</u>
V587 — Secondary CDC Contacted Vehicle letter 2 #1	00	Missing Data/Not applicable	more
V588 — Secondary CDC Contacted Vehicle letter 3 #1	00	Missing Data/Not applicable	more
V589 — Secondary CDC Contacted Vehicle letter 4 #1	00	Missing Data/Not applicable	more
V590 — Secondary CDC Contacted Vehicle Extent #1	00	Missing Data/Not applicable	more
V591 — Secondary CDC Contacted Vehicle -CDC #1	9800000	_	_
V593 — Secondary CDC Contacted Vehicle letter 1 #2	00	Missing Data/Not applicable	<u>more</u>
V594 — Secondary CDC Contacted Vehicle letter 2 #2	00	Missing Data/Not applicable	<u>more</u>
V595 — Secondary CDC Contacted Vehicle letter 3 #2	00	Missing Data/Not applicable	<u>more</u>
V596 — Secondary CDC Contacted Vehicle letter 4 #2	00	Missing Data/Not applicable	<u>more</u>
V597 — Secondary CDC Contacted Vehicle Extent #2	00	Missing Data/Not applicable	more
V598 — Secondary CDC Contacted Vehicle -CDC #2	9800000	_	

Crash Severity

Variable Number and Name	Code Value	Code Description	Other Options
V601 — Case Vehicle Primary Impact Number	1	_	_
V602 — Primary Impact Total Delta-V	041 kph	_	_
V603 — Primary Case Vehicle Reconstructed Longitudinal Delta-V	-040 kph	_	_
V604 — Primary Case Vehicle Reconstructed Lateral Delta-V	0007 kph	_	
V605 — Primary Case Vehicle Reconstructed Crush Energy	0518 kJ	_	_
V606 — Primary Impact Case Vehicle - reconstuction	21	Reconstructed, low confidence level	more
V607 — Primary Case Vehicle Reconstruction Mode	2	CDC & detailed damage	more
V608 — Primary Contacted Vehicle Reconstructed Total Delta-V	035 kph	_	_
V609 — Primary Contacted Vehicle Reconstructed Longitudinal Delta-V	-012 kph	_	_
V610 — Primary Contacted Vehicle Reconstructed Lateral Delta-V	-033 kph	_	
V611 — Primary Contacted Vehicle Reconstructed Crush Energy	0045 kJ	_	_
V612 — Case Vehicle Secondary Impact Number	8	_	
V613 — Secondary Case Vehicle Reconstructed Total Delta-V	888	N/A	more
V614 — Secondary Case Vehicle Reconstructed Longitudinal Delta-V	8888	_	
V615 — Secondary Case Vehicle Reconstructed Lateral Delta-V	8888	_	
V616 — Secondary Case Vehicle Reconstructed Crush Energy	8888	_	
V617 — Secondary Case Vehicle Reconstruction Note	88	_	
V618 — Secondary Case Vehicle Reconstruction Mode	8	Not applicable	more
V619 — Secondary Contacted Vehicle	888	N/A	more

8888	_	
8888	_	
8888	_	
1	_	_
067 kph	_	
-066 kph	_	
0012 kph	_	
0518 kJ	_	
22	Reconstructed, moderate confidence level	more
2	CDC & detailed damage	more
012 kph	_	
-004 kph	_	
-012 kph	_	
0045 kJ	_	
8	Not applicable	more
888	N/A	more
8888	_	_
8888	_	
8888	_	
88	_	
	8888 8888 1 067 kph -066 kph 0012 kph 0518 kJ 22 2 012 kph -004 kph -012 kph 0045 kJ 8 888 8888 8888	8888

V640 — Secondary Case Vehicle Reconstruction Mode	8	Not applicable	more
V641 — Secondary Contacted Vehicle Reconstruction Total EBS	888	N/A	more
V642 — Secondary Contacted Vehicle Reconstruction Longitudinal EBS	8888	_	_
V643 — Secondary Contacted Vehicle Reconstruction Lateral EBS	8888	_	_
V644 — Secondary Contacted Vehicle Reconstruction Crush Energy	8888	_	_
V645 — Case Vehicle Reconstructed Impact Number	1	_	_
V646 — Case Vehicle Impact 1 Plane	1	Bumper	more
V647 — Case Vehicle Impact 1 Direct Damage Length [DDL]	107 cm	_	_
V648 — Case Vehicle Impact 1 Max Crush	109 cm	_	_
V649 — Case Vehicle Impact 1 Field-L	126 cm	_	_
V650 — Case Vehicle Impact 1 C1	000 cm	No Crush	more
V651 — Case Vehicle Impact 1 C2	010 cm	_	
V652 — Case Vehicle Impact 1 C3	038 cm	_	
V653 — Case Vehicle Impact 1 C4	061 cm	_	_
V654 — Case Vehicle Impact 1 C5	109 cm	_	_
V655 — Case Vehicle Impact 1 C6	094 cm	_	_
V656 — Case Vehicle Impact 1 +/- D	0037 cm	_	_
V657 — Case Vehicle Reconstructed Impact Number	1	_	_
V658 — Case Vehicle Impact 2 Plane	4	Above sill	more
V659 — Case Vehicle Impact 2 Direct Damage Length [DDL]	182 cm	_	_
V660 — Case Vehicle Impact 2 Max Crush	037 cm	_	
V661 — Case Vehicle Impact 2 Field-L	227 cm	_	_
V662 — Case Vehicle Impact 2 C1	011 cm		
V663 — Case Vehicle Impact 2 C2	033 cm	_	_
V664 — Case Vehicle Impact 2 C3	037 cm	_	

V665 — Case Vehicle Impact 2 C4	028 cm	_	_
V666 — Case Vehicle Impact 2 C5	014 cm	_	_
V667 — Case Vehicle Impact 2 C6	003 cm	_	_
V668 — Case Vehicle Impact 2 +/- D	-197 cm	_	_
V669 — Other Vehicle Reconstructed Impact Number	2	_	_
V670 — Other Vehicle Impact 1 Plane	8	Not applicable	more
V671 — Other Vehicle Impact 1 Direct Damage Length [DDL]	998	Not applicable	more
V672 — Other Vehicle Impact 1 Max Crush	998	Not applicable	more
V673 — Other Vehicle Impact 1 Field-L	998	Not applicable	more
V674 — Other Vehicle Impact 1 C1	998	Not applicable	more
V675 — Other Vehicle Impact 1 C2	998	Not applicable	more
V676 — Other Vehicle Impact 1 C3	998	Not applicable	more
V677 — Other Vehicle Impact 1 C4	998	Not applicable	more
V678 — Other Vehicle Impact 1 C5	998	Not applicable	more
V679 — Other Vehicle Impact 1 C6	998	Not applicable	more
V680 — Other Vehicle Impact 1 +/- D	9998	_	_
V681 — Other Vehicle Reconstructed Impact Number	2	_	_
V682 — Other Vehicle Impact 2 Plane	8	Not applicable	more
V683 — Other Vehicle Impact 2 Direct Damage Length [DDL]	998	Not applicable	more
V684 — Other Vehicle Impact 2 Max Crush	998	Not applicable	more
V685 — Other Vehicle Impact 2 Field-L	998	Not applicable	more
V686 — Other Vehicle Impact 2 C1	998	Not applicable	more
V687 — Other Vehicle Impact 2 C2	998	Not applicable	more
V688 — Other Vehicle Impact 2 C3	998	Not applicable	more
V689 — Other Vehicle Impact 2 C4	998	Not applicable	more
V690 — Other Vehicle Impact 2 C5	998	Not applicable	more
V691 — Other Vehicle Impact 2 C6	998	Not applicable	more
V692 — Other Vehicle Impact 2 +/- D	9998	_	_

Tires & Rims

Variable Number and Name	Code Value	Code Description	Other Options
V701 — Left Front Wheel Damaged	0	No	more
V702 — Right Front Wheel Damaged	1	Yes	more
V703 — Right Rear Wheel Damaged	0	No	more
V704 — Left Rear Wheel Damaged	0	No	more
V705 — Left Front Tire Tread Type	4	All Weather	more
V706 — Right Front Tire Tread Type	4	All Weather	more
V707 — Right Rear Tire Tread Type	4	All Weather	more
V708 — Left Rear Tire Tread Type	4	All Weather	more
V709 — Left Front Carcass Construction	3	Radial	more
V710 — Right Front Carcass Construction	3	Radial	more
V711 — Right Rear Carcass Construction	3	Radial	more
V712 — Left Rear Carcass Construction	3	Radial	more
V717 — Left Front Tire Size	P23570R15	_	_
V718 — Right Front Tire Size	P23570R15	_	_
V719 — Right Rear Tire Size	P23570R15	_	_
V720 — Left Rear Tire Size	P23570R15	_	_

Fuel, Tank, Fire

Variable Number and Name	Code Value	Code Description	Other Options
V801 — Propulsive Fuel Type	1	Gasoline	more
V802 — Main Tank Location	321	Within frame/centered laterally - below vertically	more
V803 — Main Filler Cap Location	113	Left of frame laterally - above vertically	more
V804 — Main Tank Material	3	Plastic	more
V805 — Aux Tank Type	8	Not applicable (not equipped)	more
V806 — Aux Tank Location	888	Not applicable (not equipped)	more
V807 — Aux Filler Cap Location	888	Not applicable (not equipped)	more
V808 — Aux Tank Material	8	Not applicable	more
V901 — Fuel Leakage From Crash	0	No	more
V1001 — Fire In Or On Case Vehicle	0	No	more

Exterior

Variable Number and Name	Code Value	Code Description	Other Options
V1101 — Hood Latch Released	0	No	more
V1102 — Hood Latch Damaged	1	Yes	more
V1103 — Hood Latch Jammed	1	Yes	more
V1104 — Left Hood Hinge Damaged	0	No	more
V1105 — Left Hood Hinge Separated	8	Not applicable	more
V1106 — Right Hood Hinge Damaged	1	Yes	more
V1107 — Right Hood Hinge Separated	0	No	more
V1108 — Hood Remained On Vehicle	1	Yes	more
V1109 — Rear Hood Edge Elevated	1	Yes	more
V1110 — Edge Contacted Windshield	1	Yes	more
V1111 — Edge Penetrated Windshield	0	No	more
V1112 — Hood Latch Location	1	Front of Vehicle	more
V1113 — Eng/Transmissn Mount Separation	0	No	more
V1114 — Steerng Column Flex Coupling	9	Unknown if equipped	more
V1115 — Steerng Column Coupling Damaged	9	Unknown	more
V1116 — Steerng Column Coupling Separated	9	Unknown	more
V1117 — Eng Comp Telescopng Unit	88	Not collected	more
V1118 — Comp Orig/Telescopd Diff	888	Not collected	more
V1119 — Left Side Body Mount Separation	0	No	more
V1120 — Upper Left A-pillar Separation	0	No	more
V1121 — Lower Left A-pillar Separation	0	No	more
V1122 — Upper Left B-pillar Separation	0	No	more
V1123 — Lower Left B-pillar Separation	0	No	more
V1124 — Upper Left C-pillar Separation	0	No	more
V1125 — Lower Left C-pillar Separation	0	No	more

V1126 — Upper Left D-pillar Separation	0	No	more
V1127 — Lower Left D-pillar Separation	0	No	more
V1128 — Left Front Door Opening Cause	0	Door did not open	more
V1129 — Left Rear Door Opening Cause	0	Door did not open	more
V1130 — Left Front Door Jammed Closed	0	No	more
V1131 — Left Rear Door Jammed Closed	0	No	more
V1132 — Rear Door Type	4	Clamshell/disappearing tailgate	more
V1133 — Rear Door Opening Cause	0	Door did not open	more
V1134 — Rear Door Jammed Closed	0	No	more
V1135 — Luggage Partition Damagd	8	Not applicable	more
V1136 — Spare Tire Status	8	Not collected	more
V1137 — Trailer Hitch Type	0	No hitch	more
V1138 — Trailer Type	0	No trailer	more
V1139 — Right Side Body Mount Separation	0	No	more
V1140 — Upper Right A-pillar Separation	4	No separation, but damaged	more
V1141 — Lower Right A-pillar Separation	4	No separation, but damaged	more
V1142 — Upper Right B-pillar Separation	0	No	more
V1143 — Lower Right B-pillar Separation	4	No separation, but damaged	more
V1144 — Upper Right C-pillar Separation	0	No	more
V1145 — Lower Right C-pillar Separation	4	No separation, but damaged	more
V1146 — Upper Right D-pillar Separation	0	No	more
V1147 — Lower Right D-pillar Separation	0	No	more
V1148 — Right Front Door Opening Cause	00	Door did not open	more
V1149 — Right Rear Door Opening Cause	00	Door did not open	more
V1150 — Right Front Door Jammed Closed	1	Yes	more
V1151 — Right Rear Door Jammed Closed	1	Yes	more
V1152 — Van Rear Door Type	8	Not applicable (not a van)	more

V1153 — Windshield Cracked		Yes	more
V1154 — Windshield Broken	0	No	more
V1155 — Windshield Cracked or Broken by Occupant	0	No	more
V1156 — Bond Separation Extent	0	None	more
V1157 — Windshield Code		_	
V1158 — Did Sun/T Roof Open	8	Not Applicable	more

Steering

Column/Rim

Variable Number and Name	Code Value	Code Description	Other Options
V1201 — Steering Wheel Rim Damage	0	None	more
V1202 — Number of Steering Wheel Spokes	4	4 spokes	more
V1203 — Steering Wheel Spoke Damage	0	None	more
V1204 — Column Tilt Feature	1	Yes, equipped (position unknown)	more
V1205 — Column Swing-away Feature	0	Not equipped	more
V1206 — Column Telescoping Feature	0	Not equipped	more
V1207 — Wheel Energy Absorb Device	8	Not collected	more
V1208 — Wheel Ea Orig/Damaged Diff	888	Not collected	more
V1209 — Column Energy Absorb Device	88	Not collected	more
V1210 — Column Ea Orig/Comprss Diff	888	Not collected	more
V1211 — Shear Capsule Separation	888	Not collected	more
V1212 — Column Vertical Rotation	0	No apparent rotation	more
V1213 — Column Lateral Rotation	0	No apparent rotation	more
V1214 — Steering Wheel Hub Damage	0	None	more

Intrusion

Variable Number and Name	Code Value	Code Description	Other Options
V1301 — Occupant Compartment Intrusion	1	Yes	more
V1302 — Was Intrusion Catastrophic	0	No	more
V1303 — Intrusion Number 01	01	Intrusion #1	more
V1304 — Intrusion 01 Occupant Space Number	11	First row, Left seat	more
V1305 — Intrusion 01 Intruding Object	03	Toe pan	more
V1306 — Intrusion 01 Assoc Event Number	1	Event #1	more
V1307 — Intrusion 01 Max Intrusion X-axis	03 cm	_	_
V1308 — Intrusion 01 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1309 — Intrusion 01 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1310 — Intrusion 01 Occupant Number	00	No contact or no intrusion	more
V1311 — Intrusion 01 Injury Number	00	No injury or no intrusion	more
V1312 — Intrusion 01 Occupant Number	00	No contact or no intrusion	more
V1313 — Intrusion 01 Injury Number	00	No injury or no intrusion	more
V1314 — Intrusion Number 02	02	Intrusion #2	more
V1315 — Intrusion 02 Occupant Space Number	13	First row, Right seat	more
V1316 — Intrusion 02 Intruding Object	03	Toe pan	more
V1317 — Intrusion 02 Assoc Event Number	1	Event #1	more
V1318 — Intrusion 02 Max Intrusion X-axis	47 cm	_	
V1319 — Intrusion 02 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1320 — Intrusion 02 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1321 — Intrusion 02 Occupant Number	02	Occupant number 2, contact	more
V1322 — Intrusion 02 Injury Number	04	Injury #4	more
V1323 — Intrusion 02 Occupant Number	02	Occupant number 2, contact	more
V1324 — Intrusion 02 Injury Number	05	Injury #5	more

V1325 — Intrusion Number 03	03	Intrusion #3	more
V1326 — Intrusion 03 Occupant Space Number	13	First row, Right seat	more
V1327 — Intrusion 03 Intruding Object	01	Instrument panel	more
V1328 — Intrusion 03 Assoc Event Number	1	Event #1	more
V1329 — Intrusion 03 Max Intrusion X-axis	29 cm		_
V1330 — Intrusion 03 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1331 — Intrusion 03 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1332 — Intrusion 03 Occupant Number	02	Occupant number 2, contact	more
V1333 — Intrusion 03 Injury Number	04	Injury #4	more
V1334 — Intrusion 03 Occupant Number	02	Occupant number 2, contact	more
V1335 — Intrusion 03 Injury Number	05	Injury #5	more
V1336 — Intrusion Number 04	04	Intrusion #4	more
V1337 — Intrusion 04 Occupant Space Number	13	First row, Right seat	more
V1338 — Intrusion 04 Intruding Object	01	Instrument panel	more
V1339 — Intrusion 04 Assoc Event Number	1	Event #1	more
V1340 — Intrusion 04 Max Intrusion X-axis	10 cm	_	_
V1341 — Intrusion 04 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1342 — Intrusion 04 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1343 — Intrusion 04 Occupant Number	02	Occupant number 2, contact	more
V1344 — Intrusion 04 Injury Number	02	Injury #2	more
V1345 — Intrusion 04 Occupant Number	02	Occupant number 2, contact	more
V1346 — Intrusion 04 Injury Number	03	Injury #3	more
V1347 — Intrusion Number 05	05	Intrusion #5	more
V1348 — Intrusion 05 Occupant Space Number	13	First row, Right seat	more
V1349 — Intrusion 05 Intruding Object	01	Instrument panel	more
V1350 — Intrusion 05 Assoc Event Number	1	Event #1	more
V1351 — Intrusion 05 Max Intrusion X-axis	07 cm	_	
V1352 — Intrusion 05 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more

V1353 — Intrusion 05 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1354 — Intrusion 05 Occupant Number	02	Occupant number 2, contact	more
V1355 — Intrusion 05 Injury Number	02	Injury #2	more
V1356 — Intrusion 05 Occupant Number	02	Occupant number 2, contact	more
V1357 — Intrusion 05 Injury Number	03	Injury #3	more
V1358 — Intrusion Number 06	00	No Intrusion, None	more
V1359 — Intrusion 06 Occupant Space Number	00	No Intrusion, None	more
V1360 — Intrusion 06 Intruding Object	00	No Intrusion, None	more
V1361 — Intrusion 06 Assoc Event Number	0	No Intrusion, None	more
V1362 — Intrusion 06 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1363 — Intrusion 06 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1364 — Intrusion 06 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1365 — Intrusion 06 Occupant Number	00	No contact or no intrusion	more
V1366 — Intrusion 06 Injury Number	00	No injury or no intrusion	more
V1367 — Intrusion 06 Occupant Number	00	No contact or no intrusion	more
V1368 — Intrusion 06 Injury Number	99	Contact, injury unknown or data not collected	<u>more</u>
V1369 — Intrusion Number 07	00	No Intrusion, None	more
V1370 — Intrusion 07 Occupant Space Number	00	No Intrusion, None	more
V1371 — Intrusion 07 Intruding Object	00	No Intrusion, None	more
V1372 — Intrusion 07 Assoc Event Number	0	No Intrusion, None	more
V1373 — Intrusion 07 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1374 — Intrusion 07 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1375 — Intrusion 07 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1376 — Intrusion 07 Occupant Number	00	No contact or no intrusion	more
V1377 — Intrusion 07 Injury Number	00	No injury or no intrusion	more
V1378 — Intrusion 07 Occupant Number	00	No contact or no intrusion	more
V1379 — Intrusion 07 Injury Number	99	Contact, injury unknown or data not collected	<u>more</u>
V1380 — Intrusion Number 08	00	No Intrusion, None	more

V1381 — Intrusion 08 Occupant Space Number	00	No Intrusion, None	<u>more</u>
V1382 — Intrusion 08 Intruding Object	00	No Intrusion, None	more
V1383 — Intrusion 08 Assoc Event Number	0	No Intrusion, None	more
V1384 — Intrusion 08 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1385 — Intrusion 08 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1386 — Intrusion 08 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1387 — Intrusion 08 Occupant Number	00	No contact or no intrusion	more
V1388 — Intrusion 08 Injury Number	00	No injury or no intrusion	more
V1389 — Intrusion 08 Occupant Number	00	No contact or no intrusion	more
V1390 — Intrusion 08 Injury Number	99	Contact, injury unknown or data not collected	more
V1391 — Intrusion Number 09	00	No Intrusion, None	more
V1392 — Intrusion 09 Occupant Space Number	00	No Intrusion, None	more
V1393 — Intrusion 09 Intruding Object	00	No Intrusion, None	more
V1394 — Intrusion 09 Assoc Event Number	0	No Intrusion, None	more
V1395 — Intrusion 09 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1396 — Intrusion 09 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1397 — Intrusion 09 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1398 — Intrusion 09 Occupant Number	00	No contact or no intrusion	more
V1399 — Intrusion 09 Injury Number	00	No injury or no intrusion	more
V1400 — Intrusion 09 Occupant Number	00	No contact or no intrusion	more
V1401 — Intrusion 09 Injury Number	99	Contact, injury unknown or data not collected	<u>more</u>
V1402 — Intrusion Number 10	00	No Intrusion, None	more
V1403 — Intrusion 10 Occupant Space Number	00	No Intrusion, None	more
V1404 — Intrusion 10 Intruding Object	00	No Intrusion, None	more
V1405 — Intrusion 10 Assoc Event Number	0	No Intrusion, None	more
V1406 — Intrusion 10 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1407 — Intrusion 10 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more

V1408 — Intrusion 10 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1409 — Intrusion 10 Occupant Number	00	No contact or no intrusion	more
V1410 — Intrusion 10 Injury Number	00	No injury or no intrusion	more
V1411 — Intrusion 10 Occupant Number	00	No contact or no intrusion	more
V1412 — Intrusion 10 Injury Number	99	Contact, injury unknown or data not collected	<u>more</u>
V1413 — Door Intrusion Number 01	88	Not Applicable	<u>more</u>
V1414 — Door Intrusion Number 01 Cause	8	Not applicable	more
V1415 — Door Intrusion Number 02	88	Not Applicable	more
V1416 — Door Intrusion Number 02 Cause	8	Not applicable	more
V1417 — Door Intrusion Number 03	88	Not Applicable	more
V1418 — Door Intrusion Number 03 Cause	8	Not applicable	more
V1419 — Door Intrusion 01 Component	88	Not Applicable	more
V1420 — Door Intrusion 01 Component Damaged 1	8	Not Applicable	more
V1421 — Door Intrusion 01 Component Damaged 2	8	Not Applicable	more
V1422 — Door Intrusion 02 Component	88	Not Applicable	more
V1423 — Door Intrusion 02 Component Damaged 1	8	Not Applicable	more
V1424 — Door Intrusion 02 Component Damaged 2	8	Not Applicable	<u>more</u>
V1425 — Door Intrusion 03 Component	88	Not Applicable	<u>more</u>
V1426 — Door Intrusion 03 Component Damaged 1	8	Not Applicable	<u>more</u>
V1427 — Door Intrusion 03 Component Damaged 2	8	Not Applicable	<u>more</u>
V1428 — Door Intrusion 04 Component	88	Not Applicable	more
V1429 — Door Intrusion 04 Component Damaged 1	8	Not Applicable	<u>more</u>
V1430 — Door Intrusion 04 Component Damaged 2	8	Not Applicable	<u>more</u>

Airbag(s)

Variable Number and Name	Code Value	Code Description	Other Options
V1501 — Driver Airbag Equipped	1	Yes	more
V1502 — Driver Airbag Deployed	1	Yes	more
V1503 — Driver Airbag Condition	0	No Damage	more
V1504 — Passenger Airbag Equip	1	Yes	more
V1505 — Passenger Airbag Deployed	1	Yes	more
V1506 — Passenger Airbag Condition	0	No Damage	more
V1507 — Steering Wheel Airbag Tether	1	Yes	more
V1508 — Driver Airbag Marked By Contact	0	No	more
V1509 — Passenger Airbag Tether	0	No	more
V1510 — Passenger Airbag Marked By Contact	1	Yes	<u>more</u>

Interior

Variable Number and Name	Code Value	Code Description	Other Options
V1601 — Left Front Door Damaged	0	No	more
V1602 — Right Front Door Damaged	4	Yes, occupant contact	more
V1603 — Left Front Hardware Damaged	0	No	more
V1604 — Right Front Hardware Damaged	4	Yes, occupant contact	more
V1605 — Left Front Armrest Damaged	0	No	more
V1606 — Right Front Armrest Damaged	4	Yes, occupant contact	more
V1607 — Left Front Glass Damaged	0	No	more
V1608 — Right Front Glass Damaged	1	Yes	more
V1609 — Left Rear Door Area Damaged	0	No	more
V1610 — Right Rear Door Area Damaged	0	No	more
V1611 — Left Rear Hardware Damaged	0	No	more
V1612 — Right Rear Hardware Damaged	1	Yes	more
V1613 — Left Rear Armrest Damaged	0	No	more
V1614 — Right Rear Armrest Damaged	0	No	more
V1615 — Left Rear Glass Damaged	0	No	more
V1616 — Right Rear Glass Damaged	0	No	more
V1617 — Left Roof Side Rail Damaged	0	No	more
V1618 — Right Roof Side Rail Damaged	1	Yes	more
V1619 — Left B-pillar Damaged	0	No	more
V1620 — Right B-pillar Damaged	0	No	more
V1621 — Left C-pillar Damaged	0	No	more
V1622 — Right C-pillar Damaged	0	No	more

V1623 — Left D-pillar Damaged	0	No	more
V1624 — Right D-pillar Damaged	0	No	more
V1625 — Left Headlining Damaged	0	No	more
V1626 — Right Headlining Damaged	1	Yes	more
V1627 — Left Roof Structure Dama ged	0	No	more
V1628 — Right Roof Structure Damaged	1	Yes	more
V1629 — Left T/Sun Roof Damaged	8	Not applicable	more
V1630 — Right T/Sun Roof Damaged	8	Not applicable	more
V1631 — Other Left Side Item Damagd	8	Not applicable	more
V1632 — Other Right Side Item Damagd	8	Not applicable	more
V1633 — Foot Controls Damaged	1	Yes	more
V1634 — Ignition Key Damaged	0	No	more
V1635 — Rear View Mirror Damaged	0	No	more
V1636 — Sunvisor/Fitting Damaged	0	No	more
V1637 — Windshield Molding Damaged	0	No	more
V1638 — Left A-pillar Damaged	0	No	more
V1639 — Right A-pillar Damaged	1	Yes	more
V1640 — Center Console Damaged	8	Not applicable	more
V1641 — Transmission Lever Damaged	0	No	more
V1642 — Horn/Spoke Shroud Damagd	0	No	more
V1643 — Upper Panel Damaged	1	Yes	more
V1644 — Mid Panel Damaged	1	Yes	more
V1645 — Lower Panel Damaged	4	Yes, occupant contact	more
V1646 — Ashtray Damaged	0	No	more
V1647 — Control Knob/Lever Damaged	0	No	more
V1648 — Glove Compartment Area Damaged	4	Yes, occupant contact	more
V1649 — Instruments Damaged	0	No	more

V1650 — Park Brake Release Damaged	0	No	more
V1651 — Park Brake Pedal Damaged	0	No	more
V1652 — A/C Or Upper Vent Damaged	1	Yes	more
V1653 — Heater Or A/C Duct Damaged	1	Yes	more
V1654 — Radio Damaged	0	No	more
V1655 — Other Item Damaged	0	No	more
V1656 — Rear Window Damaged	0	No	more
V1657 — Rear Window Header Damaged	0	No	more
V1658 — Vertical Console Damaged	8	Not applicable	more
V1659 — Roof Console Damaged	8	Not applicable	more

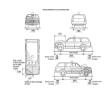
Case Vehicle

Seats

Variable Number and Name	Code Value	Code Description	Other Options
V1701 — Driver Front Seat Type	05	Bucket	more
V1702 — Passenger Front Seat Type	05	Bucket	more
V1703 — Driver Seat Mount Type	1	Standard	more
V1704 — Passenger Seat Mount Type	1	Standard	more
V1705 — Driver Swivel Mechanism Equipped	0	No	more
V1706 — Passenger Swivel Mechanism Equipped	0	No	more
V1707 — Driver Seat Original Equipment	1	Yes	more
V1708 — Passenger Seat Original Equipment	1	Yes	more
V1709 — Driver Seat/Rear Occupant Contact	8	Not applicable	more
V1710 — Passenger Seat/Rear Occupant Contact	8	Not applicable	more
V1711 — Driver Seat Damage	0	None	more
V1712 — Passenger Seat Damage	0	None	more
V1713 — Center Front Armrest Damaged	1	Yes	more
V1714 — Driver Seat Rotation	0	None apparent	more
V1715 — Passenger Seat Rotation	0	None apparent	more
V1716 — Driver Seat-back Type	3	Reclining	more
V1717 — Passenger Seat-back Type	3	Reclining	more
V1718 — Driver Seat-back Lock Type	1	Manual	more
V1719 — Passenger Seat-back Lock Type	1	Manual	more
V1720 — Driver Seat-back Lock Held	1	Yes	more
V1721 — Passenger Seat-back Lock Held	1	Yes	more
V1722 — Driver Recliner Mechanism Held	1	Yes	more

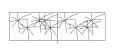
V1723 — Passenger Recliner Mechanism Held	1	Yes	more
V1724 — Driver Head Restraint Type	1	Adjustable	more
V1725 — Passenger Head Restraint Type	1	Adjustable	more
V1726 — Driver Head Rest Removed	0	No	more
V1727 — Passenger Head Rest Remo ved	0	No	more
V1728 — Driver Head Rest Adjustment	1	Up	more
V1729 — Passenger Head Rest Adjustment	2	Down	more
V1730 — Driver Head Rest Damage	0	None	more
V1731 — Passenger Head Rest Damage	0	None	more
V1732 — Driver Seat Adjustment Type	2	Power	more
V1733 — Passenger Seat Adjustment Type	1	Manual	more
V1734 — Driver Seat Adjustment Provided	3	6-way	<u>more</u>
V1735 — Passenger Seat Adjustment Provided	1	2-way	more
V1736 — Driver Seat Adjuster Damage	0	None	more
V1737 — Passenger Seat Adjuster Damage	2	Deformed (released/jammed)	more
V1738 — Driver Seat Adjuster Separation	8	Not applicable	more
V1739 — Passenger Seat Adjuster Separation	0	None	more
V1740 — Driver Seat Pre-crash Position	2	Middle	<u>more</u>
V1741 — Passenger Seat Pre-crash Position	2	Middle	more
V1742 — Left Rear Seat Type	2	Folding	more
V1743 — Right Rear Seat Type	2	Folding	more
V1744 — Left Rear Seat Damaged	0	None	more
V1745 — Right Rear Seat Damaged	0	None	more
V1746 — Center Rear Armrest Damaged	0	No	more
V1747 — Left Rear Seat-back Left Lock Equipped	1	Yes	more

V1748 — Right Rear Seat-back Left Lock Equipped	0	No	more
V1749 — Left Rear Seat-back Left Lock Held	1	Yes	more
V1750 — Right Rear Seat-back Left Lock Held	8	Not applicable	more
V1751 — Left Rear Seat-back Right Lock Equipped	0	No	more
V1752 — Right Rear Seat-back Right Lock Equipped	1	Yes	more
V1753 — Left Rear Seat-back Right Lock Held	8	Not applicable	more
V1754 — Right Rear Seat-back Right Lock Held	1	Yes	more
V1755 — Left 3rd Seat Equipped	0	No	more
V1756 — Right 3rd Seat Equipped	0	No	more
V1757 — Left 3rd Seat Backrest Damaged	8	Not applicable	more
V1758 — Right 3rd Seat Backrest Damaged	8	Not applicable	more
V1759 — Left 3rd Seat Cushion Damaged	8	Not applicable	more
V1760 — Right 3rd Seat Cushion Damaged	8	Not applicable	more
V1761 — Rear Head Restraints	1	Equipped	more









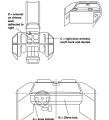
1 = Definitely 2 = Probably 3 = Possible

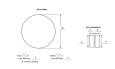
INTRUSION IT-1

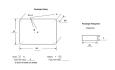
		(All Me	(All Measurements Are in Centimeters)				Dominant
Location of Intrusion	Intruded Component	Comparison Value	_	Intruded Value	=	Intrusion	Crush Direction
13	Toepan – far right	128	_	81	=	47	Х
13	Toepan – below glove box contact	110	_	81	=	29	Х
13	Instrument panel – left	82	-	72	=	10	X
13	Instrument panel – right	83	_	76	=	7	X
11	Toepan		_		=	3	X
			_		=		
		<u> </u>	_	·	=		
			_		=		

OCCUPANT CONTACT WORKSHEET

	Interior Component	Occupant No. if	Body Region		Confidence Level of Contact
Contact	Contacted	Known	if Known	Supporting Physical Evidence	Point
Α	knee bolster	Dr	knees	scuff mark	1
В	glove box	RF	knees	scuff marks	1
С	door armrest	RF	Rt. hip	scuff mark and dented	1
D	armrest on driver seat	DR	Rt. hip	deflected to left	1
Е					
F					
G					
Н					
I					
J					
K					







Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	01	Injury #1	more
V2102 — 1st Prob Contact Area	98	Impact force, "whiplash", hyperextension/ compression	more
V2103 — 2nd Prob Contact Area	87	Air cushion skin "airbag"	more
V2104 — Primary OIC -body Region	08	Head/skull	more
V2105 — Primary OIC -aspect	23	Whole region	more
V2106 — Primary OIC -lesion	11	Concussion	more
V2107 — Primary OIC -system/Organ	02	Brain	more
V2108 — Primary OIC -severity	2	Moderate	more
V2109 — Primary OIC	HWKB2	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_		

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	02	Injury #2	more
V2102 — 1st Prob Contact Area	34	Restraint system webbing	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	19	Shoulder	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	01	Abrasion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	SLAI1	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	_

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	03	Injury #3	more
V2102 — 1st Prob Contact Area	05	Instrument panel (specific area unknown)	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	23	Wrist/hand	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	03	Contusion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	WLCI1	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	04	Injury #4	more
V2102 — 1st Prob Contact Area	05	Instrument panel (specific area unknown)	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	23	Wrist/hand	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	01	Abrasion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	WLAI1	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_		

Case # 293: Occupant # 1

Variable Number and Name	Code Value	Code Description	Other Options
V2001 — Occupant Number	01	Occupant #1	more
V2002 — Occupant Role At 1st Impact	1	Motor vehicle driver	more
V2003 — Occupant Position -row	1	1st row	more
V2004 — Occupant Position -lateral	1	Left	more
V2005 — Occupant Position -posture	10	Sitting on seat	more
V2006 — Occupant Age In Years	28	_	<u> </u>
V2007 — Occupant Age In Months	25	25 months or older	more
V2008 — Occupant Mass	095 kg	_	<u> </u>
V2009 — Occupant Height	178 cm	_	<u> </u>
V2010 — Occupant Sex	1	Male	more
V2011 — Occupant Treatment/Mortality	02	Treated at hospital/clinic but not admitted	more
V2012 — Injury Severity Score	05	ISS 5	more
V2013 — Non-impact Med Condition	0	None	more
V2014 — Police Injury Severity	2	B - Non-incapacitating Injury	more
V2015 — Active Restraint System	3	Both lap belt and shoulder harness	more
V2016 — Active Restraint Usage	3	Both lap belt and shoulder harness	more
V2017 — Passive Restraint System	1	Air bag installed	more
V2018 — Passive Restraint Usage	2	Air bag deployed	more
V2019 — Child Seat Type	88	Not applicable (adult or older child)	more
V2020 — Occupant Ejection Degree	0	None	more
V2021 — Occupant Ejection Area	98	Not applicable (not ejected)	more

V2022 — Highest OIC Severity	2	Moderate	more
V2023 — Head Restraint Available	1	Equipped	more
V2024 — Occupant Eyewear	0	None	more
V2025 — Source of Occupant Info	7	Combination of above	more

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	01	Injury #1	more
V2102 — 1st Prob Contact Area	20	Surface of side interior	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	16	Pelvic/hip	more
V2105 — Primary OIC -aspect	18	Right	more
V2106 — Primary OIC -lesion	03	Contusion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	PRCI1	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	_

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	02	Injury #2	more
V2102 — 1st Prob Contact Area	02	Glove compartment area	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	11	Knee	more
V2105 — Primary OIC -aspect	18	Right	more
V2106 — Primary OIC -lesion	03	Contusion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	KRCI1	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	_

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	03	Injury #3	more
V2102 — 1st Prob Contact Area	02	Glove compartment area	more
V2103 — 2nd Prob Contact Area	00	No Contact/not applicable	more
V2104 — Primary OIC -body Region	11	Knee	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	03	Contusion	more
V2107 — Primary OIC -system/Organ	09	Integumentary	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	KLCI1	_	_
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	04	Injury #4	more
V2102 — 1st Prob Contact Area	40	Floor	more
V2103 — 2nd Prob Contact Area	38	Other (e.g. fire)	more
V2104 — Primary OIC -body Region	17	Ankle/foot	more
V2105 — Primary OIC -aspect	18	Right	more
V2106 — Primary OIC -lesion	19	Sprain	more
V2107 — Primary OIC -system/Organ	10	Joints	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	QRSJ1	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Variable Number and Name	Code Value	Code Description	Other Options
V2101 — Injury Number	05	Injury #5	more
V2102 — 1st Prob Contact Area	40	Floor	more
V2103 — 2nd Prob Contact Area	38	Other (e.g. fire)	more
V2104 — Primary OIC -body Region	17	Ankle/foot	more
V2105 — Primary OIC -aspect	12	Left	more
V2106 — Primary OIC -lesion	19	Sprain	more
V2107 — Primary OIC -system/Organ	10	Joints	more
V2108 — Primary OIC -severity	1	Minor	more
V2109 — Primary OIC	QLSJ1	_	
V2110 — Assoc OIC 1 -body Region	99	No injury	more
V2111 — Assoc OIC 1 -aspect	99	No injury	more
V2112 — Assoc OIC 1 -lesion	99	No injury	more
V2113 — Assoc OIC 1 -system/Organ	99	No injury	more
V2114 — Assoc OIC 1 -severity	9	Unknown	more
V2115 — Assoc OIC 1	_	_	

Case # 293: Occupant # 2

Variable Number and Name	Code Value	Code Description	Other Options
V2001 — Occupant Number	02	Occupant #2	more
V2002 — Occupant Role At 1st Impact	2	Motor vehicle passenger	more
V2003 — Occupant Position -row	1	1st row	more
V2004 — Occupant Position -lateral	1	Left	more
V2005 — Occupant Position -posture	10	Sitting on seat	more
V2006 — Occupant Age In Years	34	<u> </u>	_
V2007 — Occupant Age In Months	25	25 months or older	more
V2008 — Occupant Mass	091 kg	_	_
V2009 — Occupant Height	178 cm	_	_
V2010 — Occupant Sex	1	Male	more
V2011 — Occupant Treatment/Mortality	01	First aid at scene	more
V2012 — Injury Severity Score	02	ISS 2	more
V2013 — Non-impact Med Condition	0	None	more
V2014 — Police Injury Severity	3	A - Incapacitating Injury	more
V2015 — Active Restraint System	3	Both lap belt and shoulder harness	more
V2016 — Active Restraint Usage	0	None (available but not used)	more
V2017 — Passive Restraint System	1	Air bag installed	more
V2018 — Passive Restraint Usage	2	Air bag deployed	more
V2019 — Child Seat Type	88	Not applicable (adult or older child)	more
V2020 — Occupant Ejection Degree	0	None	more
V2021 — Occupant Ejection Area	98	Not applicable (not ejected)	more
V2022 — Highest OIC Severity	1	Minor	more

V2023 — Head Restraint Available	1	Equipped	more
V2024 — Occupant Eyewear	0	None	more
V2025 — Source of Occupant Info	7	Combination of above	more

































































































































